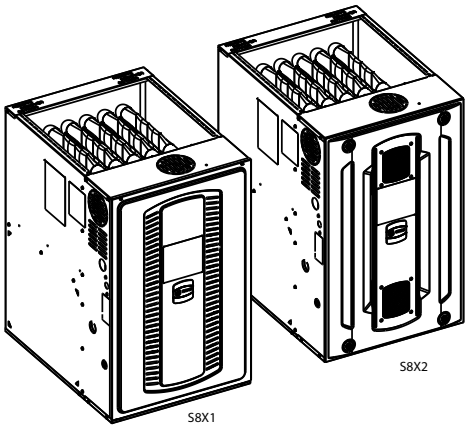
Product and Submittal Data

Upflow/Downflow/Horizontal
Gas-Fired, 1–Stage and 2–Stage Induced Draft Furnaces with High Efficiency Motor

Single Stage – Upflow, Downflow, Horizontal Right/Left
S8X1A040M3PSCA/C
S8X1B040M2PSCA/C
S8X1B060M4PSCB/C
S8X1B080M4PSCB/C
S8X1C080M5PSCA/C
S8X1C100M5PSCB/C
S8X1D120M5PSCA/C

Two Stage – Upflow, Downflow, Horizontal Right/Left
S8X2A040M3PSCA/B
S8X2B060M4PSCA/B
S8X2B080M4PSCA/B
S8X2C080M5PSCA/B
S8X2C100M5PSCA/B
S8X2D120M5PSCA/B



Notes:

- *Graphics in this document are for representation only. Actual model may differ in appearance.*
- *This Installation, Operation, and Maintenance is used for multiple furnace families. Models may have a "T" in the 12th digit designating they meet California less than 40 ng/J (NOx) emissions requirements.*

October 2026

FNR-PSD003B-EN

Introduction

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Revision History

Removed S8B1 content.

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General Features

Natural Gas Models

Central Heating furnace designs are certified by Intertek/ETL for both natural and propane gas. Limit setting and rating data were established and approved under standard rating conditions using American National Standards Institute standards.

Safe Operation

The Integrated Furnace Control is a solid state device which continuously monitors for presence of flame when the system is in the heating mode of operation. Dual solenoid combination gas valve and regulator provide additional safety.

Quick Heating

Durable, cycle tested, heavy gauge tubular aluminized steel heat exchanger quickly transfers heat to provide warm conditioned air to the structure. Low energy power vent blower, to increase efficiency and provide a discharge of gas fumes to the outside.

Burners

Multiport, Inshot burners will give years of quiet and efficient service. All models can be converted to propane gas with propane conversion kit.

Integrated Furnace Control

Exclusively designed operational program provides total control of furnace limit sensors, blowers, gas valve, flame control and includes self diagnostics for ease of service.

Energy Efficient Operation

Air-Tite™ cabinet design is certified to <1% air leakage per ASHRAE 193 “Method of Test for Determining the Airtightness of HVAC Equipment.”

Air Delivery

The nine-speed constant torque blower motor has sufficient airflow for most heating and cooling requirements and will switch from heating to cooling speeds on demand from room thermostat.

Styling

Heavy gauge steel and wrap-around cabinet construction is used in the cabinet with baked-on enamel finish for strength and beauty. Every orientation has at least two venting options. There are no knockouts on cabinet.

Features and General Operation

The furnace utilizes a Silicon Nitride Hot Surface Ignition system, which eliminates the waste of a constant burning pilot. The integrated system control lights the main burners on demand for heat from the room thermostat. Complete front service access.

1. Low energy power venter
2. Vent proving pressure switches

Features and Benefits

80% AFUE on S8X1 and S8X2 Furnace Models

Lowers utility bills

Electricity Efficient

Efficient airflow design reduces electrical energy use

34-InchTall

- Lighter, easier to move and fit into tight spaces like short basements or tight closets
- Works great with larger, high-efficiency coils
- No knockouts

4–Way Multi-Poise

S8X1 – 7 SKU's — Upflow / Downflow / Horizontal Left / Horizontal Right

S8X2 – 6 SKU's —Upflow / Downflow / Horizontal Left / Horizontal Right

Added application flexibility and reduction in specification errors

Airflow

At least 400 CFM/ton at 0.5-inch H_20 external static pressure

Regulatory

All models are air tight; 1% or less air leakage as per ASHRAE 193

Open vestibule design provides a full 34-inch high open vestibule for ease of installation and service

Dimensions

Widths are industry standard: 14.5 inch, 17.5 inch, 21 inch and 24.5 inch

Depth remains approximately 28-inch

Cabinet is compatible with industry standard coils, as well as, other accessories

Integrated Furnace Control

Setup / Status / Diagnostics / Digital Display

No dip switches

Last six errors stored

Dry contact EAC and HUM connections

All multi-pin polarized terminals connections; no spade terminals

Low voltage labeled above and below

Tubular Aluminized Steel Heat Exchanger

Vortica II Blower, Designed Exclusively for the S-Series Furnace

Improved airflow efficiency

Durable, easy to clean, housing

Single piece belly band/ motor arm assembly

Blower deck has full-length rails for easy removal and replacement, regardless of poise

Four-Way Multi-Poise (Upflow, Downflow, Horizontal Left and Right)

Easier to specify

Shipped ready to install (no conversion kits required)

Every model has at least two venting options

Accessories

Table 1. Accessories

Model Number	Description	Use with
BAYHANG	Horizontal hanging kit	All furnaces
BAYLIFTB[a]	Dual return kit (B size extension)	All B cabinet furnaces
BAYLIFTC[a]	Dual return kit (C size extension)	All C cabinet furnaces
BAYLIFTD[a]	Dual return kit (D size extension)	All D cabinet furnaces
BAYBASE205	Downflow subbase	All furnaces in downflow orientation
BAYFLTR203	Horizontal filter kit	B cabinet furnace in downflow/horizontal
BAYFLTR204	Horizontal filter kit	C cabinet furnace in downflow/horizontal
BAYFLTR205	Horizontal filter kit	D cabinet furnace in downflow/horizontal
BAYFLTR206	Filter access door kit (downflow only)	All furnaces in downflow orientation
BAYSF1165[a][b]	1 in. SlimFit cabinet with MERV 4 filter	All upflow furnaces
BAYSF1255[b]	1 in. SlimFit rack with MERV 4 filter	All furnaces when used in side return application; B cabinet furnaces only when in bottom return application
FLRSF1255	1 in. filter replacement (Qty 12)	BAYSF1255[b]
BAYVENT600A	Internal venting kit	B, C, and D furnaces in downflow orientation
BAYVENT800B	Masonry chimney vent kit	All furnaces in upflow orientation only
BAYSWT14AHALTAB	High altitude pressure switch kit	S8X1C080M5P*, S8X1C100M5P*, S8X1D120M5P*
BAYSWT15AHALTAA	High altitude pressure switch kit	S8X1B060M4P*, S8X1B080M4P*
BAYSWT16AHALTAB	High altitude pressure switch kit	S8X2C080M5P*
BAYSWT17AHALTAA	High altitude pressure switch kit	S8X2B060M4PSAAA
BAYSWT18AHALTAA	High altitude pressure switch kit	S8X2B080M4P*
BAYSWT19AHALTAA	High altitude pressure switch kit	S8X2C100M5P*
BAYSWT21AHALTAA	High altitude pressure switch kit	S8X1A040M3P*, S8*1B040M2P*
BAYSWT22AHALTAA	High altitude pressure switch kit	S8X2A040M3P*
BAYSWT23AHALTAA	High altitude pressure switch kit	S8X2B060M4PSAAB and later, S8X2B060M4PTAAA and later
BAYSWT24AHALTAA	High altitude pressure switch kit	S8X2D120M5P*
BAYLPSS400[b]	Propane conversion kit with stainless steel burners	All furnaces
BAYBURNERSS	All stainless steel natural gas burners - set of six	All upflow furnaces - special case
PIP02095	U fitting for gas piping	All furnaces for right hand gas entry

[a] Airflow greater than 1600 CFM; furnace will require return air openings and filters on: (1) both sides, (2) one side and the bottom, or (3) just on the bottom.
[b] Latest Revision

Product Specifications

Table 2. Models S8X1A040M3PSCA/C, S8X1B040M2PSCA/C, S8X1B060M4PSCB/C, and S8X1B080M4PSCB/C

Model	S8X1A040M3PSCA/C[a]	S8X1B040M2PSCA/C [a]	S8X1B060M4PSCB/C[a]	S8X1B080M4PSCB/C[a]
Type	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow
Ratings [b]				
Input BTUH	40,000	40,000	60,000	80,000
Capacity BTUH (ICS) [c]	32,300	32,500	48,700	65,100
Temp. Rise (Min. - Max.) °F	30 - 60	30 - 60	30 - 60	30 - 60
AFUE - Rating [c]	80	80	80	80
Return Air Temp. (Min. - Max.) °F	55°F - 80°F	55°F - 80°F	55°F - 80°F	55°F - 80°F
Blower Drive	Direct	Direct	Direct	Direct
CEE Tier	None	None	None	None
Energy Star Rated Region	None	None	None	None
Energy Star Orientation	None	None	None	None
Integrated Furnace Control				
Input-Communication Protocol	24 Volts	24 Volts	24 Volts	24 Volts
Diameter - Width (in.)	11 X 8	11 X 8	11 X 8	11 X 8
No. Used	1	1	1	1
Speeds (No.) [d]	CTM - 9	CTM - 9	CTM - 9	CTM - 9
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
Motor HP	1/2	1/3	3/4	3/4
R.P.M.	1050	1050	1050	1050
Volts / Ph / Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	6.4	4.1	9.2	9.2
Combustion Fan - Type	PSC	PSC	SP	SP
Drive - No. Speeds	Direct - 1	Direct - 1	Direct - 1	Direct - 1
Motor RPM	3300 / 3162	3300 / 3225	3300	3300
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	0.30	0.30	1.40	1.40
Inducer Orifice	1.20	1.15	1.40	2.15
Filter - Furnished?	No	No	No	No
Type Recommended	High Velocity	High Velocity	High Velocity	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 14 X 25 - 1 in.	1 - 16 X 25 - 1 in.	1 - 16 X 25 - 1 in.	1 - 16 X 25 - 1 in.
Vent Pipe Diameter - Min. (in.) [e]	4 Round	4 Round	4 Round	4 Round
Heat Exchanger - Type	Aluminized Steel	Aluminized Steel	Aluminized Steel	Aluminized Steel
Gauge (Fired)	20 - 19	20 - 19	20 - 19	20 - 19
Orifices - Main		—		
Nat. Gas Qty. - Drill Size	2 - 45	2 - 45	3 - 45	4 - 45
L.P. Gas Qty. - Drill Size	2 - 56	2 - 56	3 - 56	4 - 56
Gas Valve	Redundant - Single Stage	Redundant - Single Stage	Redundant - Single Stage	Redundant - Single Stage
Pilot Safety Device - Type	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter
Burners - Qty	2	2	3	4
Power Connection - V/Ph/HZ [f]	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
Ampacity (Amps)	8.5	5.6	13.1	13.1
Max. Overcurrent Protection (Amps)	15	15	15	15
Pipe Connection Size (in.)	1/2	1/2	1/2	1/2
Dimensions	H x W x D	H x W x D	H x W x D	H x W x D
Uncrated (in.)	34 x 14.5 x 28.75	34 x 17.5 x 28.75	34 x 17.5 x 28.75	34 x 17.5 x 28.75
Crated (in.)	35.5 x 16.5 x 30.87	35.5 x 19.5 x 30.87	35.5 x 19.5 x 30.87	35.5 x 19.5 x 30.87
Weight				
Shipping (Lbs.)/Net (Lbs.)	102 / 94	128 / 120	128 / 120	137 / 129

Table 2. Models S8X1A040M3PSCA/C, S8X1B040M2PSCA/C, S8X1B060M4PSCB/C, and S8X1B080M4PSCB/C (continued)

(a) Central Furnace heating designs are certified to ANSI Z21.47 - latest edition.
(b) For U.S. applications, above input ratings (BTUH) are up to 2,000 feet, derate 4% per 1,000 feet for elevations above 2,000 feet above sea level.
(c) Based on U.S. government standard tests
(d) 9 Speed constant torque ECM Blower Motor.
(e) Refer to the Installer's Guide.
(f) The above wiring specifications are in accordance with National Electric Code, however, installations must comply with local codes.

Table 3. Models S8X1C080M5PSCA/C, S8X1C100M5PSCB/C, and S8X1D120M5PSCA/C

Model	S8X1C080M5PSCA/C	S8X1C100M5PSCB/C(a)	S8X1D120M5PSCA/C (a)
Type	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow
Ratings (b)			
Input BTUH	80,000	100,000	120,000
Capacity BTUH (ICS) (c)	64,700	80,700	98,000
Temp. Rise (Min. - Max.) °F	30 - 60	30 - 60	35 - 65
AFUE - Rating (c)	80	80	80
Return Air Temp. (Min. - Max.) °F	55°F - 80°F	55°F - 80°F	55°F - 80°F
CEE Tier	None	None	None
Energy Star Rated Region	None	None	None
Energy Star Orientation	None	None	None
Integrated Furnace Control			
Input-Communication Protocol	24 Volts	24 Volts	24 Volts
Blower Drive	DIRECT	DIRECT	DIRECT
Diameter - Width (in.)	11 X 11	11 X 11	11 X 11
No. Used	1	1	1
Speeds (No.) (d)	CTM - 9	CTM - 9	CTM - 9
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
Motor HP	1	1	1
R.P.M.	1050	1050	1050
Volts / Ph / Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	10.9	10.9	10.9
Combustion Fan - Type	PSC	PSC	PSC
Drive - No. Speeds	Direct - 1	Direct - 1	Direct - 1
Motor RPM	3300 / 2971	3300 / 2680	3300 / 3025
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	0.30 / 0.43	0.33 / 0.58	0.33 / 0.57
Inducer Orifice	1.80	2.50	2.15
Fiter - Furnished?	No	No	No
Type Recommended	High Velocity	High Velocity	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 20 X 25 - 1 in.	1 - 20 X 25 - 1 in.	1 - 24 X 25 - 1 in.
Vent Pipe Diameter - Min. (in.) (e)	4 Round	4 Round	4 Round
Heat Exchanger - Type	Aluminized Steel	Aluminized Steel	Aluminized Steel
Gauge (Fired)	20 - 19	20 - 19	20 - 19
Orifices - Main			
Nat. Gas Qty. - Drill Size	4 - 45	5 - 45	6 - 45
L.P. Gas Qty. - Drill Size	4 - 56	5 - 56	6 - 56
Gas Valve	Redundant - Single Stage	Redundant - Single Stage	Redundant - Single Stage
Pilot Safety Device - Type	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter
Burners - Qty	4	5	6
Power Connection - V/Ph/HZ (f)	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
Ampacity (Amps)	14.1 / 14.2	14.1 / 14.4	14.1 / 14.4
Max. Overcurrent Protection (Amps)	15	15	15
Pipe Connection Size (in.)	1/2	1/2	1/2
Dimensions	H x W x D	H x W x D	H x W x D

Table 3. Models S8X1C080M5PSCA/C, S8X1C100M5PSCB/C, and S8X1D120M5PSCA/C (continued)

Model	S8X1C080M5PSCA/C	S8X1C100M5PSCB/C[a]	S8X1D120M5PSCA/C [a]
Uncrated (in.)	34 x 21 x 28.75	34 x 21 x 28.75	34 x 24.5 x 28.75
Crated (in.)	35.5 x 23 x 30.87	35.5 x 23 x 30.87	35.5 x 26.5 x 30.87
Weight			
Shipping (Lbs.)/Net (Lbs.)	142 / 134	144 / 136	160 / 152

[a] Central Furnace heating designs are certified to ANSI Z21.47 - latest edition.
[b] For U.S. applications, above input ratings (BTUH) are up to 2,000 feet, derate 4% per 1,000 feet for elevations above 2,000 feet above sea level.
[c] Based on U.S. government standard tests
[d] 9 Speed constant torque ECM Blower Motor.
[e] Refer to the Installer's Guide.
[f] The above wiring specifications are in accordance with National Electric Code, however, installations must comply with local codes.

Table 4. Models S8X2A040M3PSCA/B, S8X2B060M4PSCA/B, and S8X2B080M4PSCA/B

Model	S8X2A040M3PSCA/B[a]	S8X2B060M4PSCA/B[a]	S8X2B080M4PSCA/B[a]
Type	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow
Ratings [b]	—		
1st Stage Input BTUH	26,000	39,000	52,000
1st Stage Capacity BTUH (ICS)	20,900	31,500	42,500
2nd Stage Input BTUH	40,000	60,000	80,000
2nd Stage Capacity BTUH (ICS) [c]	32,200	48,700	65,000
1st Stage Temp. Rise (Min. - Max.) °F	20 - 50	20 - 50	25 - 55
2nd Stage Temp. Rise (Min. - Max.) °F	30 - 60	30 - 60	30 - 60
AFUE (%) [c]	80	80	80
Return Air Temp. (Min. - Max.) °F	55°F - 80°F	55°F - 80°F	55°F - 80°F
Blower Drive	DIRECT	DIRECT	DIRECT
Diameter - Width (in.)	11 X 8	11 X 8	11 X 8
No. Used	1	1	1
Speeds (No.) [d]	CTM - 9	CTM - 9	CTM - 9
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
Motor HP	1/2	3/4	3/4
R.P.M.	1050	1050	1050
Volts / Ph / Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	6.4	9.2	9.2
Combustion Fan - Type	PSC	PSC	PSC
Drive - No. Speeds	Direct - 2	Direct - 2	Direct - 2
Motor RPM	3300/2600	3300/2600	3300/2600
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	0.30	0.30	0.33
Inducer Orifice	1.20	1.40	1.75
Filter - Furnished?	No	No	No
Type Recommended	High Velocity	High Velocity	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 14 X 25 - 1 in.	1 - 16 X 25 - 1 in.	1 - 16 X 25 - 1 in.
Vent Pipe Diameter - Min. (in.) [e]	4 Round	4 Round	4 Round
Heat Exchnager - Type	Aluminized Steel	Aluminized Steel	Aluminized Steel
Gauge (Fired)	20 - 19	20 - 19	20 - 19
Orifices - Main	—		
Nat. Gas Qty. - Drill Size	2 - 45	3 - 45	4 - 45
L.P. Gas Qty. - Drill Size	2 - 56	3 - 56	4 - 56
Gas Valve	Redundant - Two Stage	Redundant - Two Stage	Redundant - Two Stage
Pilot Safety Device - Type	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter
Burners - Qty	2	3	4
Power Connection. - V/Ph/HZ [f]	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
Ampacity (Amps)	8.5	12.0	12.0
Max. Overcurrent Protection (Amps)	15	15	15
Pipe Connection Size (in.)	1/2	1/2	1/2
Dimensions	H x W x D	H x W x D	H x W x D

Table 4. Models S8X2A040M3PSCA/B, S8X2B060M4PSCA/B, and S8X2B080M4PSCA/B (continued)

Model	S8X2A040M3PSCA/B[a]	S8X2B060M4PSCA/B[a]	S8X2B080M4PSCA/B[a]
Uncrated (in.)	34 x 14.5 x 28.75	34 x 17.5 x 28.75	34 x 17.5 x 28.75
Crated (in.)	35.5 x 16.5 x 30.87	35.5 x 19.5 x 30.87	35.5 x 19.5 x 30.87
Weight		—	
Shipping (Lbs.)/Net (Lbs.)	102 / 94	132 / 124	137 / 129

[a] Central Furnace heating designs are certified to ANSI Z21.47 - latest edition.
[b] For U.S. applications, above input ratings (BTUH) are up to 2,000 feet, derate 4% per 1,000 feet for elevations above 2,000 feet above sea level.
[c] Based on U.S. government standard tests
[d] 9 Speed constant torque ECM Blower Motor.
[e] Refer to the Installer's Guide.
[f] The above wiring specifications are in accordance with National Electric Code, however, installations must comply with local codes.

Table 5. Models S8X2C080M5PSCA/B , S8X2C100M5PSCA/B, and S8X2D120M5PSCA/B

Model	S8X2C080M5PSCA/B [a]	S8X2C100M5PSCA/B [a]	S8X2D120M5PSCA/B [a]
Type	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow
Ratings [b]		—	
1st Stage Input BTUH	52,000	65,000	84,000
1st Stage Capacity BTUH (ICS)	41,800	52,300	67,800
2nd Stage Input BTUH	80,000	100,000	120,000
2nd Stage Capacity BTUH (ICS) [c]	64,900	80,600	98,000
1st Stage Temp. Rise (Min. - Max.) °F	30 - 60	25 - 55	30 - 60
2nd Stage Temp. Rise (Min. - Max.) °F	30 - 60	30 - 60	35 - 65
AFUE (%) [c]	80	80	80
Return Air Temp. (Min. - Max.) °F	55°F - 80°F	55°F - 80°F	55°F - 80°F
Blower Drive	DIRECT	DIRECT	DIRECT
Diameter - Width (in.)	11 X 11	11 X 11	11 X 11
No. Used	1	1	1
Speeds (No.) [d]	CTM - 9	CTM - 9	CTM - 9
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
Motor HP	1	1	1
R.P.M.	1050	1050	1050
Volts / Ph / Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	10.9	10.9	10.9
Combustion Fan - Type	PSC	PSC	PSC
Drive - No. Speeds	Direct - 2	Direct - 2	Direct - 2
Motor RPM	3300/2600	3300/2600	3300/2600
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	0.30	0.33	0.33
Inducer Orifice	1.80	2.50	2.15
Filter - Furnished?	No	No	No
Type Recommended	High Velocity	High Velocity	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 20 X 25 - 1 in.	1 - 20 X 25 - 1 in.	1 - 24 X 25 - 1 in.
Vent Pipe Diameter - Min. (in.) [e]	4 Round	4 Round	4 Round
Heat Exchanger - Type	Aluminized Steel	Aluminized Steel	Aluminized Steel
Gauge (Fired)	20 - 19	20 - 19	20 - 19
Orifices - Main		—	
Nat. Gas Qty. - Drill Size	4 - 45	5 - 45	6 - 45
L.P. Gas Qty. - Drill Size	4 - 56	5 - 56	6 - 56
Gas Valve	Redundant - Two Stage	Redundant - Two Stage	Redundant - Two Stage
Pilot Safety Device - Type	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter
Burners - Qty	4	5	6
Power Connection- V/Ph/HZ [f]	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
Ampacity (Amps)	14.1	14.1	14.1
Max. Overcurrent Protection (Amps)	15	15	15
Pipe Connection Size (in.)	1/2	1/2	1/2
Dimensions	H x W x D	H x W x D	H x W x D

Table 5. Models S8X2C080M5PSCA/B , S8X2C100M5PSCA/B, and S8X2D120M5PSCA/B (continued)

Model	S8X2C080M5PSCA/B [a]	S8X2C100M5PSCA/B [a]	S8X2D120M5PSCA/B [a]
Uncrated (in.)	34 x 21 x 28.75	34 x 21 x 28.75	34 x 24.5 x 28.75
Crated (in.)	35.5 x 23 x 30.87	35.5 x 23 x 30.87	35.5 x 26.5 x 30.87
Weight		—	
Shipping (Lbs.)/Net (Lbs.)	142 / 134	144 / 136	160 / 152

[a] Central Furnace heating designs are certified to ANSI Z21.47 - latest edition.
[b] For U.S. applications, above input ratings (BTUH) are up to 2,000 feet, derate 4% per 1,000 feet for elevations above 2,000 feet above sea level.
[c] Based on U.S. government standard tests
[d] 9 Speed constant torque ECM Blower Motor.
[e] Refer to the Installer's Guide.
[f] The above wiring specifications are in accordance with National Electric Code, however, installations must comply with local codes.

Airflow Tables

Table 6. Airflow performance — models S8X1A040M3PSC and S8X2A040M3PSC

Furnace Airflow (SCFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
S8X1A040M3PSC S8X2A040M3PSC	1	SCFM / Watts	592 / 40	342 / 43	93 / 46	—	—
	2	SCFM / Watts	666 / 48	467 / 56	268 / 65	70 / 74	—
	3	SCFM / Watts	687 / 49	493 / 59	299 / 69	105 / 78	—
	4	SCFM / Watts	938 / 100	788 / 111	638 / 123	488 / 134	338 / 146
	5	SCFM / Watts	1006 / 119	870 / 131	733 / 144	597 / 156	461 / 169
	6	SCFM / Watts	1068 / 140	944 / 154	820 / 167	696 / 181	573 / 194
	7	SCFM / Watts	1174 / 181	1066 / 196	957 / 211	848 / 226	740 / 241
	8	SCFM / Watts	1167 / 194	1098 / 219	1029 / 244	960 / 269	891 / 294
	9	SCFM / Watts	1556 / 398	1474 / 416	1392 / 435	1310 / 453	1228 / 471

Table 7. Airflow performance — model S8X1B040M2PSC

Furnace Airflow (SCFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
S8X1B040M2PSC	1	SCFM / Watts	526 / 34	-	-	-	-
	2	SCFM / Watts	744 / 54	533 / 63	322 / 72	110 / 81	-
	3	SCFM / Watts	820 / 68	662 / 81	504 / 94	346 / 106	188 / 119
	4	SCFM / Watts	967 / 97	811 / 110	654 / 122	498 / 135	341 / 148
	5	SCFM / Watts	997 / 104	840 / 116	687 / 129	533 / 142	380 / 154
	6	SCFM / Watts	1052 / 119	911 / 133	771 / 148	630 / 162	490 / 176
	7	SCFM / Watts	1099 / 134	968 / 150	837 / 165	706 / 180	575 / 196
	8	SCFM / Watts	1168 / 157	1047 / 174	926 / 191	805 / 208	684 / 225
	9	SCFM / Watts	1303 / 214	1196 / 233	1088 / 252	981 / 271	874 / 290

Table 8. Airflow performance — models S8X1B060M4PSC and S8X2B060M4PSC

Furnace Airflow (SCFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
S8X1B060M4PSC S8X2B060M4PSC	1	SCFM / Watts	596 / 38	287 / 42	—	—	—
	2	SCFM / Watts	851 / 70	667 / 81	483 / 92	299 / 102	115 / 113
	3	SCFM / Watts	1142 / 141	1018 / 156	893 / 172	769 / 187	644 / 203
	4	SCFM / Watts	1196 / 160	1079 / 176	961 / 192	844 / 208	726 / 224
	5	SCFM / Watts	1362 / 220	1258 / 239	1154 / 257	1050 / 276	946 / 294
	6	SCFM / Watts	1416 / 250	1319 / 269	1221 / 288	1124 / 307	1026 / 327
	7	SCFM / Watts	1495 / 287	1402 / 307	1309 / 327	1216 / 347	1123 / 367
	8	SCFM / Watts	1574 / 337	1487 / 357	1401 / 378	1314 / 399	1228 / 420
	9	SCFM / Watts	1983 / 659	1899 / 670	1815 / 680	1730 / 691	1646 / 701

Table 9. Airflow performance — models S8X1B080M4PSC and S8X2B080M4PSC

Furnace Airflow (SCFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
S8X1B080M4PSC S8X2B080M4PSC	1	SCFM / Watts	552 / 34	160 / 34	—	—	—
	2	SCFM / Watts	891 / 82	720 / 93	549 / 105	378 / 117	207 / 129
	3	SCFM / Watts	1123 / 141	996 / 157	869 / 173	742 / 189	615 / 205
	4	SCFM / Watts	1344 / 224	1240 / 224	1136 / 263	1033 / 283	929 / 302
	5	SCFM / Watts	1479 / 290	1384 / 312	1290 / 333	1196 / 354	1102 / 375
	6	SCFM / Watts	1583 / 354	1496 / 376	1408 / 398	1321 / 420	1234 / 442
	7	SCFM / Watts	1654 / 405	1572 / 428	1491 / 451	1409 / 474	1327 / 496
	8	SCFM / Watts	1818 / 542	1739 / 561	1661 / 581	1582 / 600	1503 / 619
	9	SCFM / Watts	1926 / 645	1841 / 656	1756 / 667	1670 / 679	1585 / 690

Table 10. Airflow performance — models S8X1C080M5PSC and S8X2C080M5PSC

Furnace Airflow (SCFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
S8X1C080M5PSC S8X2C080M5PSC	1	SCFM / Watts	728 / 44	358 / 49	—	—	—
	2	SCFM / Watts	809 / 53	540 / 63	271 / 74	—	—
	3	SCFM / Watts	1440 / 185	1273 / 201	1105 / 218	938 / 234	770 / 250
	4	SCFM / Watts	1536 / 220	1385 / 238	1233 / 257	1081 / 275	929 / 293
	5	SCFM / Watts	1689 / 278	1552 / 299	1414 / 320	1277 / 342	1140 / 363
	6	SCFM / Watts	1792 / 326	1661 / 348	1530 / 371	1400 / 394	1269 / 417
	7	SCFM / Watts	1899 / 373	1771 / 397	1643 / 422	1515 / 446	1387 / 471
	8	SCFM / Watts	2094 / 500	1985 / 527	1875 / 554	1766 / 582	1656 / 609
	9	SCFM / Watts	2533 / 931	2414 / 932	2295 / 933	2176 / 933	2058 / 934

Table 11. Airflow performance — models S8X1C100M5PSC and S8X2C100M5PSC

Furnace Airflow (SCFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
S8X1C100M5PSC S8X2C100M5PSC	1	SCFM / Watts	821 / 55	442 / 55	64 / 54	—	—
	2	SCFM / Watts	1359 / 163	1195 / 180	1031 / 198	868 / 215	704 / 233
	3	SCFM / Watts	1602 / 246	1461 / 268	1321 / 290	1180 / 312	1040 / 334
	4	SCFM / Watts	1807 / 336	1678 / 362	1550 / 388	1421 / 414	1292 / 440
	5	SCFM / Watts	1827 / 345	1700 / 371	1572 / 398	1444 / 425	1317 / 451
	6	SCFM / Watts	1925 / 395	1800 / 423	1675 / 451	1550 / 479	1425 / 508
	7	SCFM / Watts	2102 / 503	1985 / 534	1869 / 566	1752 / 597	1635 / 628
	8	SCFM / Watts	2222 / 602	2115 / 635	2008 / 667	1901 / 700	1794 / 732
	9	SCFM / Watts	2458 / 896	2351 / 913	2245 / 930	2138 / 947	2032 / 964

Table 12. Airflow performance — models S8X1D120M5PSC and S8X2D120M5PSC

Furnace Airflow (SCFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
S8X1D120M5PSC S8X2D120M5PSC	1	SCFM / Watts	1469 / 184	912 / 126	355 / 68	—	—
	2	SCFM / Watts	1429 / 175	1165 / 171	900 / 168	636 / 164	371 / 160
	3	SCFM / Watts	1567 / 215	1401 / 232	1235 / 248	1069 / 264	903 / 280
	4	SCFM / Watts	1858 / 334	1731 / 361	1605 / 388	1478 / 415	1351 / 441
	5	SCFM / Watts	2004 / 418	1890 / 447	1776 / 476	1662 / 505	1548 / 534
	6	SCFM / Watts	2110 / 488	2004 / 518	1898 / 549	1792 / 580	1686 / 611
	7	SCFM / Watts	2245 / 596	2148 / 629	2052 / 662	1956 / 695	1860 / 729
	8	SCFM / Watts	2440 / 765	2345 / 794	2250 / 824	2155 / 854	2060 / 884
	9	SCFM / Watts	2536 / 882	2431 / 904	2325 / 927	2220 / 949	2114 / 972

CFM Versus Temperature Rise

Notes:

- *S8X1 Furnaces have one stage heating.*
- *S8X2 Furnaces have two stage heating. First stage is low heating and second stage is high heating.*

Table 13. S8X1

Model	CFM Versus Temperature Rise																			
	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
S8X1A040M3PSC	59	49	42	37	33	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—
S8X1B040M2PSC	59	49	42	37	33	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—
S8X1B060M4PSC	—	—	—	56	49	44	40	37	34	32	—	—	—	—	—	—	—	—	—	—
S8X1B080M4PSC	—	—	—	—	—	59	54	49	46	42	40	37	35	33	—	—	—	—	—	—
S8X1C080M5PSC	—	—	—	—	—	59	54	49	46	42	40	37	35	33	—	—	—	—		—
S8X1C100M5PSC	—	—	—	—	—	—	—	—	57	53	49	46	44	41	39	37	35	34	32	31
S8X1D120M5PSC	—	—	—	—	—	—	—	—	—	—	59	56	52	49	47	44	42	40	39	37

Table 14. S8X2 — low heat

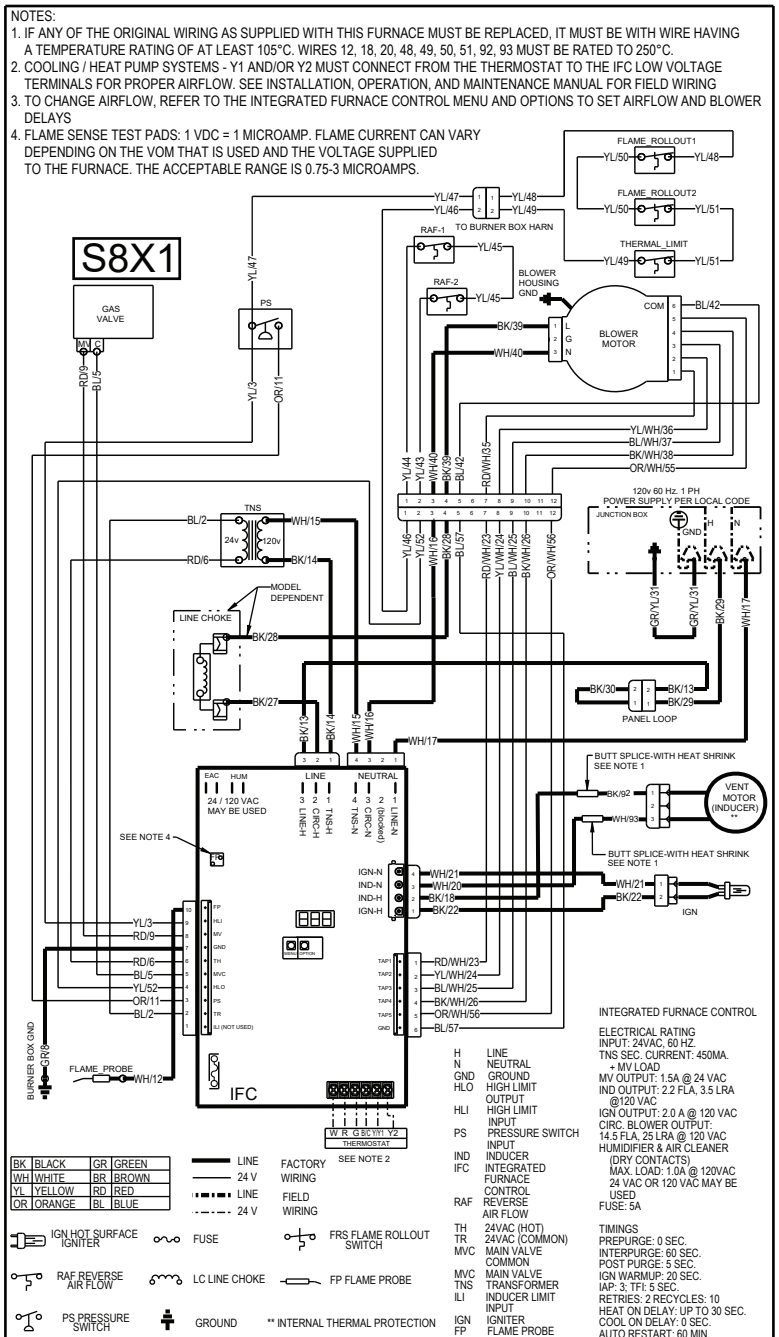
Model	CFM Versus Temperature Rise — First Stage (Low) Heating																
	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
S8X2A040M3PSC	48	39	32	28	—	—	—	—	—	—	—	—	—	—	—	—	—
S8X2B060M4PSC	—	56	47	40	35	31	28	—	—	—	—	—	—	—	—	—	—
S8X2B080M4PSC	—	—	—	55	48	43	39	35	32	30	28	—	—	—	—	—	—
S8X2C080M5PSC	—	—	—	55	48	43	39	35	32	30	28	—	—	—	—	—	—
S8X2C100M5PSC	—	—	—	—	60	53	48	44	40	37	34	32	30	—	—	—	—
S8X2D120M5PSC	—	—	—	—	—	—	—	57	52	48	44	41	39	37	35	33	31

Table 15. S8X2 — high heat

Model	CFM Versus Temperature Rise — Second Stage (High) Heating																				
	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
S8X2A040M3PSC	—	59	49	42	37	33	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—
S8X2B060M4PSC	—	—	—	—	56	49	44	40	37	34	32	—	—	—	—	—	—	—	—	—	—
S8X2B080M4PSC	—	—	—	—	—	—	59	54	49	46	42	40	37	35	33	—	—	—	—	—	—
S8X2C080M5PSC	—	—	—	—	—	—	59	54	49	46	42	40	37	35	33	—	—	—	—	—	—
S8X2C100M5PSC	—	—	—	—	—	—	—	—	—	57	53	49	46	44	41	39	37	35	34	32	31
S8X2D120M5PSC	—	—	—	—	—	—	—	—	—	—	—	59	56	52	49	47	44	42	40	39	37

Wiring Diagrams

Figure 1. S8X1 — wiring diagram



1 Stage Inducer with CTM Blower Motor

Status Codes	
Idl	Idle
Ht	Heating
tP	Blower Tap Number
COF	Continuous Fan
CP1	Cooling/Heat Pump Mode
dft	Defrost Mode
Menu Options	
Orn	Orientation
Err	Active Alarm Menu
L6F	Last 6 Faults (To Clear, Hold Option Button 5 sec)
Cr	Code Release Number
COd	Cooling Off Delay (sec)
OdU	Outdoor Unit

HOd	Heat Off Delay (sec)		
COF	Blower Tap for Continuous Fan		
COP	C1.	Blower Tap for 1st Stage Compressor Mode	
	C2.	Blower Tap for 2nd Stage Compressor Mode	
HtP	H1.	Blower Tap for Heating Mode	
r Un	Run Test Mode		
Error Codes			
E01	Loss of IRQ or internal failures		
E2.1	Retry exceeded (Failed to est flame)		
E2.2	Recycles exceeded (loss of established flame or PS open x10)		
E2.3	Gas Valve not energized when it should be exceeded after 10 times		

E3.1	Shorted Pressure Switch
E3.2	Open Pressure Switch
E04	Open Thermal Limit, Rollout Switch, or Reverse Airflow Switch
E05	Flame detected, should not be present
E6.1	Voltage reversed polarity
E6.2	Bad Grounding
E6.3	(1) Igniter relay fails (2) Igniter open
E7.1	Gas valve is energized whenit should be off
E08	Flame current is low, but still strong enough to allow operation
E11	(1) Gas valve not energized (2) Gas valve relay stuck closed
E12	Open fuse

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Figure 2. S8X1 — ladder diagram

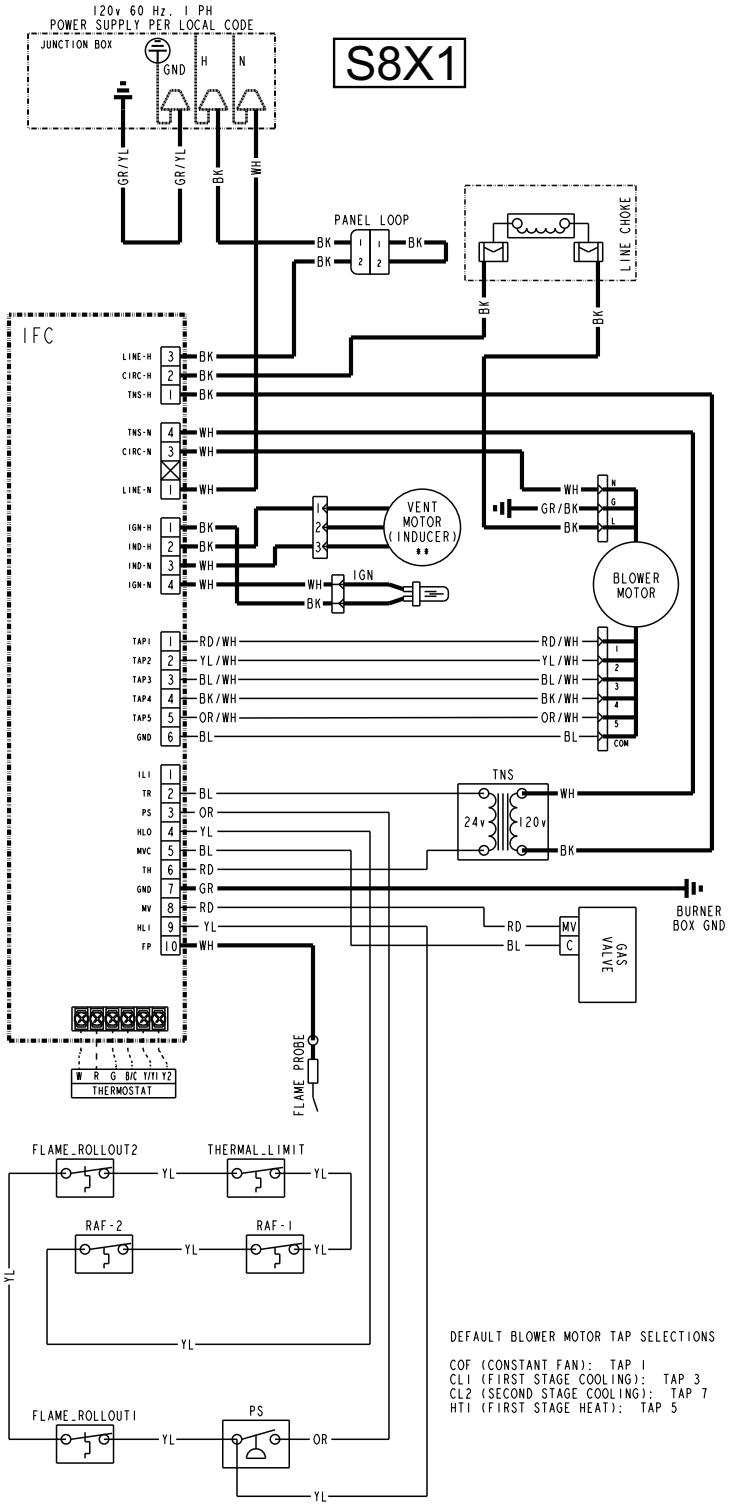


Figure 3. S8X2 — wiring diagram

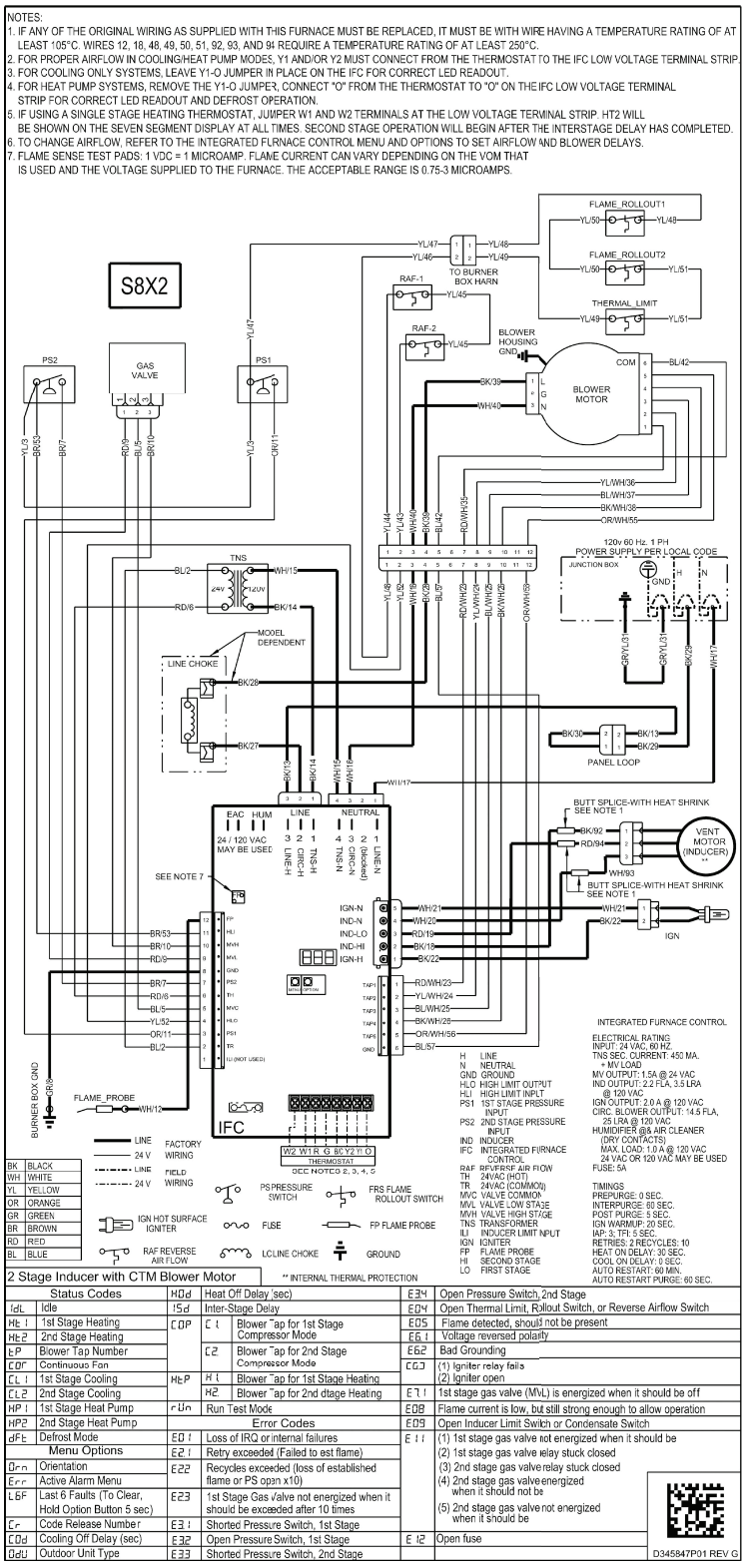
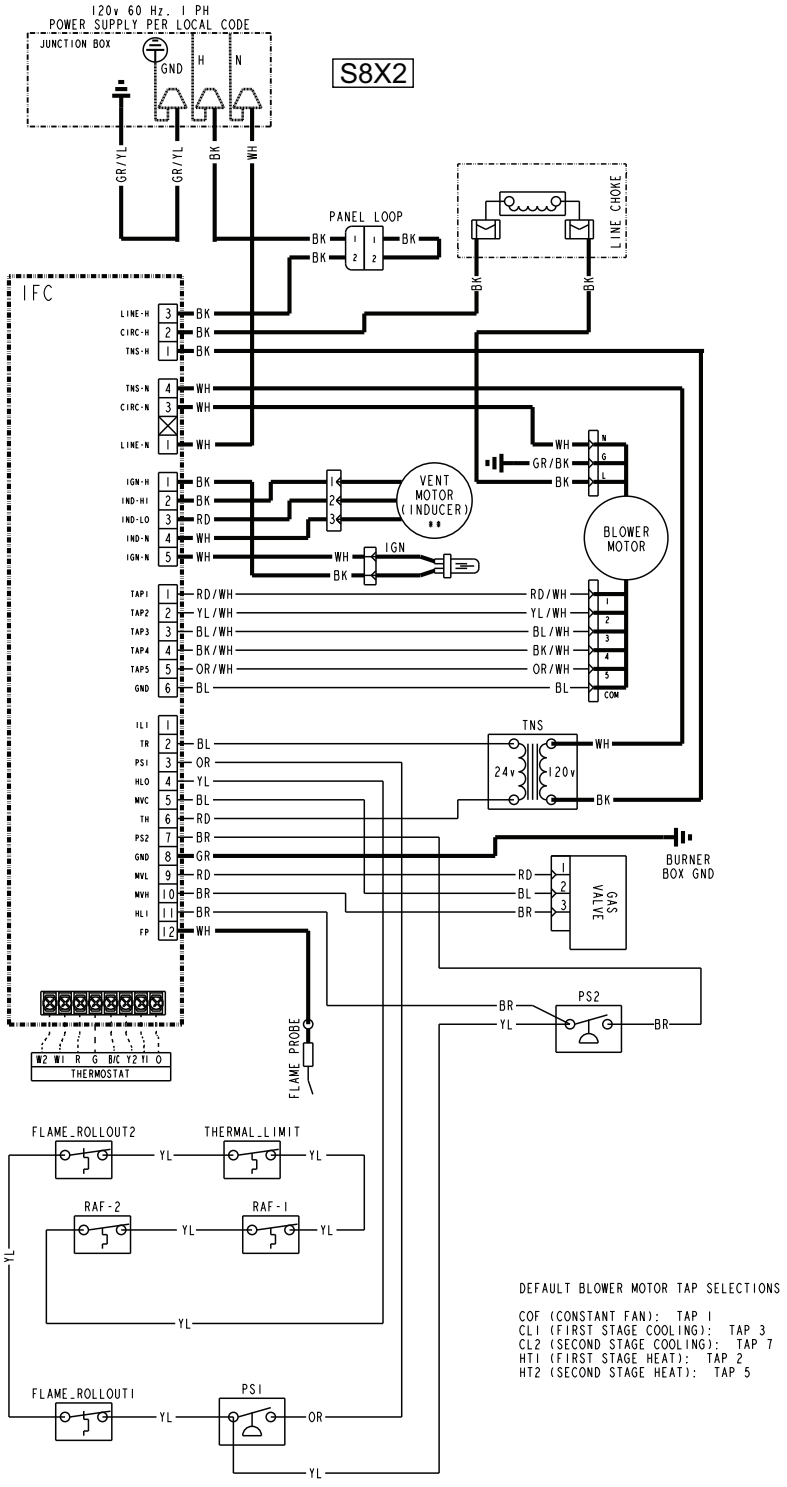


Figure 4. S8X2 — ladder diagram



Electrical Connections

Make wiring connections to the unit as indicated on enclosed wiring diagram. As with all gas appliances using electrical power, this furnace shall be connected into a permanently live electric circuit. It is recommended that furnace be provided with a separate "circuit protection device" electric circuit. The furnace must be electrically grounded in accordance with local codes or in the absence of local codes with the National Electrical Code, ANSI/NFPA 70 , if an external electrical source is utilized. The integrated furnace control is polarity sensitive. The hot leg of the 120V power supply must be connected to the black power lead as indicated on the wiring diagram.

Refer to the Installation, Operation, and Maintenance literature and the unit wiring diagram attached to the furnace.

Field Wiring

Figure 5. Field wiring diagram for S8X1 with one or two stage AC or heat pump

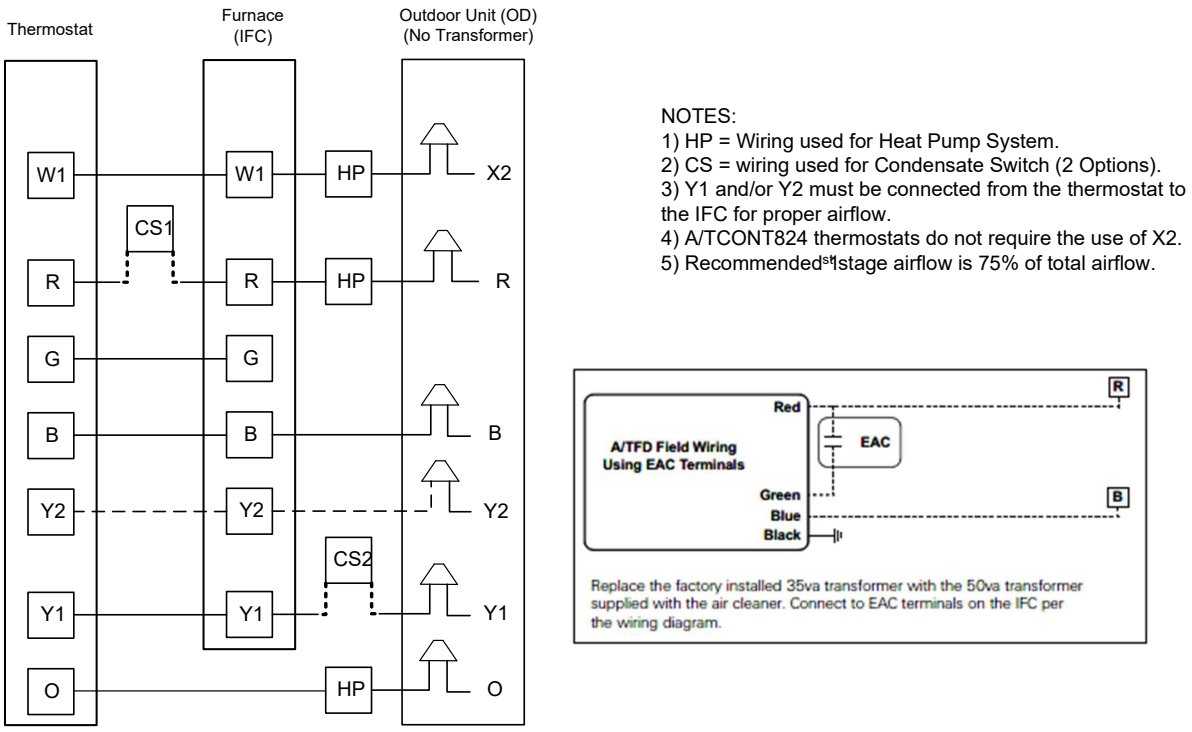
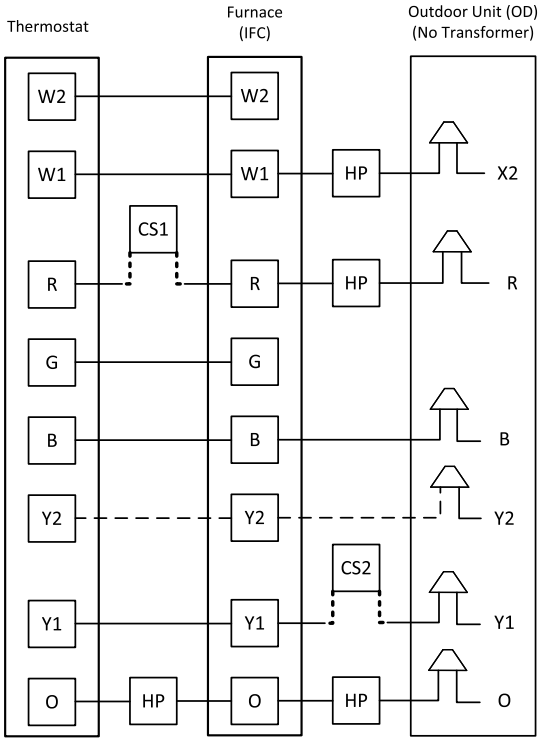


Figure 6. Field wiring diagram for S8X2 with one or two stage AC or heat pump



NOTES:
1) HP = Wiring used for Heat Pump System.
2) CS = wiring used for Condensate Switch (2 Options).
3) Y1 and/or Y2 must be connected from the thermostat to the IFC for proper airflow.
4) Remove Y1-O jumper for HP systems. O terminal must be connected as shown for gas heating operation during defrost.
5) If the thermostat does not have a W2, or there are not enough conductors, jumper W1 to W2 at the IFC.
6) A/TCONT824 thermostats do not require the use of X2.
7) Recommended 1st stage airflow is 75% of total airflow

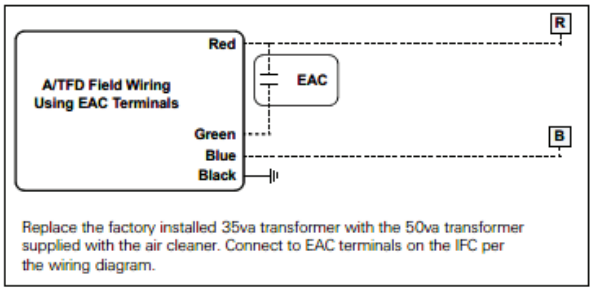
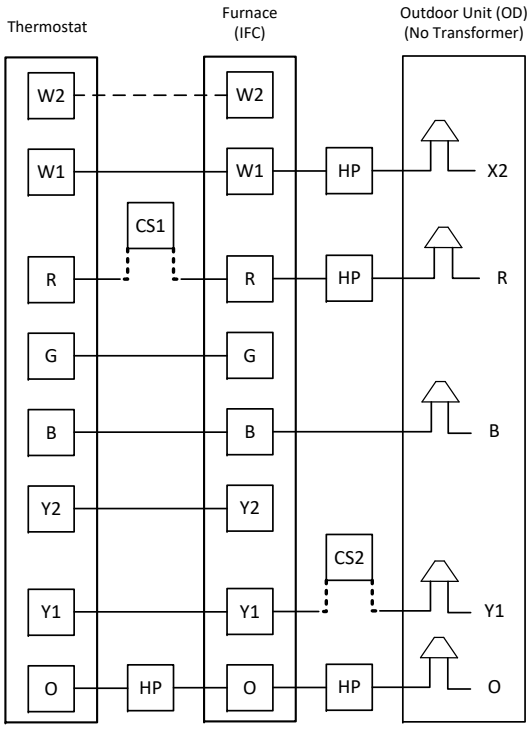
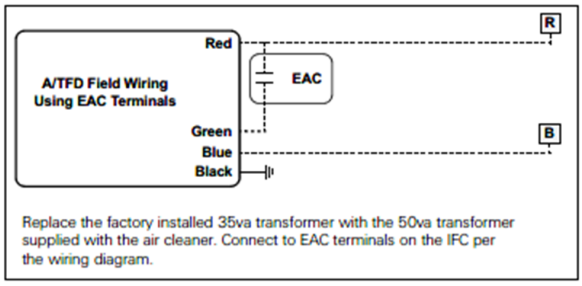


Figure 7. Field wiring diagram for S8X1/S8X2 with single stage AC or heat pump with two stage airflow

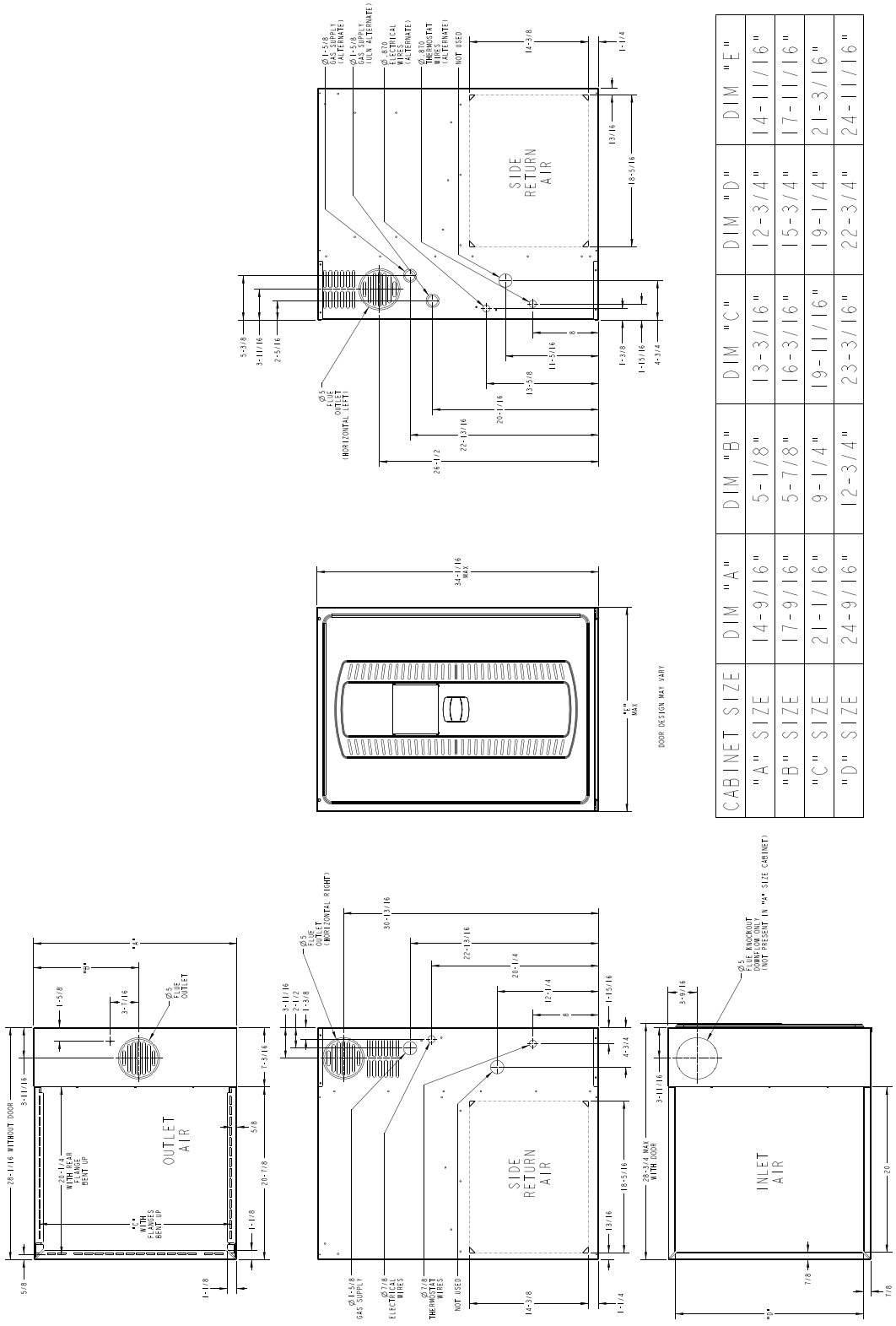


NOTES:
1) HP = Wiring used for Heat Pump System.
2) CS = wiring used for Condensate Switch (2 Options).
3) Y1 and Y2 must be connected from the thermostat to the IFC for proper airflow.
4) Thermostat must be setup for 2 stage OD.
5) IFC Must be setup for 2 stage OD using the Menu/Option Buttons.
6) For S8X2, remove Y1-O jumper for HP systems. O terminal must be connected as shown for gas heating operation during defrost.
7) Recommended 1st stage airflow is 75% of total airflow.
8) A/TCONT824 thermostats do not require the use of X2.
9) W2 and O not available for S8X1.



Dimensional Data

Figure 8. 14.5-inch, 17.5-inch, 21-inch and 24.5-inch width cabinets



CABINET SIZE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
"A" SIZE	14-9/16"	5-1/8"	13-3/16"	12-3/4"	14-11/16"
"B" SIZE	17-9/16"	5-7/8"	16-3/16"	15-3/4"	17-11/16"
"C" SIZE	21-1/16"	9-1/4"	19-11/16"	19-1/4"	21-3/16"
"D" SIZE	24-9/16"	12-3/4"	23-3/16"	22-3/4"	24-11/16"

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